

REMARKS:

The Office Action dated December 31, 2003, has been carefully considered. In response thereto, the present application has been amended in a manner that is believed to place it into condition for allowance. Accordingly, reconsideration and withdrawal of the outstanding rejections and issuance of a Notice of Allowance are respectfully requested.

In the present Office Action, the Examiner has rejected claims 1-3, 5-12, 15-23 and 25-30 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,513,395 to *Jones* (“the ‘395 patent”). The Examiner has also rejected claims 13, 14 and 24 under 35 U.S.C. § 103(a) as being upatentable over *Jones* in view of U.S. Patent No. 4,150,653 to *Grancoin* (“the ‘653 patent”). Applicant addresses each of those rejections below.

Claim Rejection - 35 U.S.C. § 102(e):

The Examiner has rejected claims 1-3, 5-12, 15-23 and 25-30 under 35 U.S.C. § 102(e) as being anticipated by the ‘395 patent. Applicant respectfully traverses the Examiner’s rejection.

Independent claims 1, 22 and 26, as amended, recite that the area of “magnetization” is “predominantly axially” magnetized. The specification, in particular FIGS. 1 and 5-7, provides support for this amendment. One of ordinary skill in the art will understand that methods of magnetizing an anisotropic magnetoelastic material, such as the methods illustrated in FIGS. 1 and 6-8 of the present application, will produce a predominantly axially-aligned or obliquely-aligned remanent magnetization of the material.

Applicant submits that the ‘395 patent discloses and teaches a region of remanent magnetization that is predominantly circumferentially aligned. See col. 4, lines 42-60. Accordingly, the ‘395 patent does not anticipate amended claims 1, 22 and 26 of the present application. For the same reasons, the ‘395 patent does not anticipate claims 2-3, 5-12 and 15-21 (which depend from claim 1), claim 23 (which depends from claim 22) nor claims 27, 29 and 30 (which depend from claim 26). Claims 25 and 28 are being cancelled; therefore, the rejection of those claims is moot.

Withdrawal of the § 102(e) rejection is respectfully requested.

Claim Rejection - 35 U.S.C. § 103(a) – Claims 13, 14 and 24:

The Examiner has rejected claims 13, 14 and 24 under 35 U.S.C. § 103(a) as being unpatentable over the '395 patent in view of the '653 patent. For the reasons described below, Applicant respectfully traverses the Examiner's rejection and submits that the Examiner has not established a *prima facie* case of obviousness with respect to claims 13, 14 and 24.

The Examiner contends that the '653 patent discloses a single region of magnetization (41) extending obliquely to an axis, as shown in Figure 22 of the patent, and that one of ordinary skill in the art would have been motivated to modify the invention disclosed in the '395 patent with the oblique region taught in the '653 patent to come up with the invention claimed in claim 13 of the present application. The motivation to combine the two, according to the Examiner, is that the combination would create a sinusoidal variation of the field on the element.

In Figure 22, there is a magnetized region 41 that is radially-aligned with respect to the axis of the shaft (see Figure 20). The magnetized region 41' is shown oriented obliquely to the housing in which it is contained, but it is clearly magnetized along its axial length from south to north as shown. Thus, the magnetized region 41' is actually radially-aligned with respect to the axis of the shaft. The magnetized region 41' is not magnetized obliquely with respect to the axis of the shaft. The angle at which the magnet 41' is oriented is not a construction feature of the design but rather the angular position that the magnet carrier happens to be in.

Amended claim 13, which was re-written in independent form, recites that a member has a structure which extends generally radially of an axis to transmit a stress between a radially inner region of the structure and a radially outer region. Thus, the "axis" in claim 13 is referring to the rotational axis at or near the center of the member where the applied stress originates. Amended claim 13 requires that the magnetization be aligned obliquely with respect to that axis. Figures 20 and 22 of the '653 patent do not disclose or teach that oblique feature of the claimed invention.

Accordingly, because there are differences between the present claimed subject matter and that which is disclosed in any one or a combination of the cited patents, Applicant respectfully submits that the Examiner's reasoning does not establish a *prima facie* case of obviousness with respect to amended claim 13. Because claim 14 depends from claim 13,

Applicant submits that there is no *prima facie* case of obviousness with respect to that claim either.

With regard to amended claim 24, that claims was amended to recite that the first and second magnetized regions are predominantly axially magnetized. As discussed above, the ‘395 patent discloses circumferentially-aligned magnetization. Applicant submits that there is no disclosure in the ‘653 patent of an axial magnetized region as recited in claim 24. Moreover, even if there were such a disclosure, one of ordinary skill in the art would not have been motivated to modify the invention in the ‘395 patent to include axial magnetization.

Withdrawal of the obviousness rejection is respectfully requested.

Claim Rejection - 35 U.S.C. § 103(a) – Claim 4:

The Examiner has rejected claim 4 under 35 U.S.C. § 103(a) as being upatentable over the ‘395 patent in view of U.S. Patent Appl. Publication No. 2003/0150282 to May (“the ‘282 application”). For the reasons described below, Applicant respectfully traverses the Examiner’s rejection and submits that the Examiner has not established a *prima facie* case of obviousness with respect to claim 4.

The ‘282 application is not prior art with respect to the present application because both pending applications are by the same inventive entity (i.e., Lutz May, as the sole inventor). Thus, the ‘282 application is not “by another” as would be required for it to qualify as prior art under § 102(e).

Other Amendments

Claims 10 and 22 were also amended, not in response to a rejection of those claims, but to better recite that which is disclosed in the specification. In particular, claims 10 and 22 were amended to recite that each region of magnetization is magnetized to form a closed magnetic circuit independent of the other region. This feature of the invention is disclosed in the specification (see FIGS. 1 and 5, for example).